

INTERNATIONAL SEARCH REPORT

US2004/024541

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C07D237/20 C07D237/22 A61K31/501 A61P3/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 C07D A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BEILSTEIN Data, EMBASE, BIOSIS, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/102778 A1 (YAMANOUCHI PHARMACEUTICAL CO., LTD; IWATA, MASAHIRO; KAWANO, NORIYUKI;) 27 December 2002 (2002-12-27) the whole document -& EP 1 396 487 A1 (YAMANOUCHI PHARMACEUTICAL CO. LTD) 10 March 2004 (2004-03-10) page 31; example 49	10, 11, 37
P, X	----- WO 02/10154 A2 (ELI LILLY AND COMPANY; HERRON, DAVID, KENT; JOSEPH, SAJAN; MARQUART, A) 7 February 2002 (2002-02-07) claim 1	10, 11, 37
X	----- WO 99/00386 A1 (RESOLUTION PHARMACEUTICALS INC; POLLAK, ALFRED; DUNN-DUFAULT, ROBERT;) 7 January 1999 (1999-01-07) examples 5, 7	1-3
X	----- -/--	10, 37

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

1 February 2005

15/02/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	& WO 02/102778 A1 (YAMANOUCHI PHARMACEUTICAL CO., LTD; IWATA, MASAHIRO; KAWANO, NORIYUKI;) 27 December 2002 (2002-12-27) -----	
X	WO 97/37975 A1 (DR. KARL THOMAE GMBH) 16 October 1997 (1997-10-16) page 31 page 70; example 28 -----	1-3,10, 37
X	US 5 166 147 A (EARL ET AL) 24 November 1992 (1992-11-24) column 17; example 8 -----	1-3,10, 37
X	EP 0 320 032 A1 (JANSSEN PHARMACEUTICA N.V) 14 June 1989 (1989-06-14) p.28 (ex. 13,14,16), p.33(ex.30), p.34(ex.88) -----	10,37
X	EP 0 211 457 A2 (JANSSEN PHARMACEUTICA N.V) 25 February 1987 (1987-02-25) examples 6,9 -----	10,37
X	EP 0 156 433 A2 (JANSSEN PHARMACEUTICA N.V) 2 October 1985 (1985-10-02) page 54; example 41 -----	10,37
X	US 2 985 657 A (JANSSEN PAUL A. J) 23 May 1961 (1961-05-23) examples 20,24 -----	10,37
X	HORI T ET AL: "STUDIES ON ANTITUMOR-ACTIVE 2,3-DIOXOPIPERAZINE DERIVATIVES. III. SYNTHESIS AND STRUCTURE-ANTITUMOR ACTIVITY RALATIONSHIP OF 1-(4-AMINOBENZYL)-2,3-DIOXOPIPERAZINE DERIVATIVES" CHEMICAL AND PHARMACEUTICAL BULLETIN, PHARMACEUTICAL SOCIETY OF JAPAN. TOKYO, JP, vol. 29, no. 5, 1981, pages 1253-1266, XP001063113 ISSN: 0009-2363 example 17x; table VI -----	10,37
X	STECK ET AL.: "Pyridazines. VII ..." J.HETEROCYCL.CHEM., vol. 11, 1974, pages 1077-1079, XP002315167 page 1079 -----	10
		-/-

INTERNATIONAL SEARCH REPORT

US2004/024541

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TOLDY L ET AL: "PIPERAZINDERIVATE, I. 3,4,5-TRIMETHOXYBENZOYLDERIVATE, EINE NEUE VERBINDUNGSGRUPPE MIT ANTIULZEROGENER WIRKUNG" ACTA CHIMICA ACADEMIAE SCIENTIARUM HUNGARICA, BUDAPEST, HU, vol. 49, no. 3, 1966, pages 265-286, XP008033826 ISSN: 0001-5407 page 268; example 15 -----	10,11, 15,37
X	RATOUIS ET AL.: "Synthesis and pharmacological..." J.MED.CHEM., vol. 8, 1965, pages 104-107, XP002315168 page 105; example 38 -----	10,37
X	BOISSIER J R ET AL: "SYNTHESIS AND PHARMACOLOGICAL STUDY OF NEW PIPERAZINE DERIVATIVES. I. BENZYLPIPERAZINES" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. WASHINGTON, US, vol. 6, September 1963 (1963-09), pages 541-544, XP001148182 ISSN: 0022-2623 page 542; example XXIII -----	10,37
X	DATABASE CAPLUS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; RN: 15567-65-4 1967, TOLDY ET AL.: "Piperazine derivatives..." XP002315169 retrieved from STN Database accession no. AN:1967:473577 abstract & ACTA CHIM.ACAD.SCI.HUNG., vol. 52, no. 3, 1967, pages 283-299, -----	10,37
X	DATABASE CAPLUS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; RN:18524-49-7 1968, TOLDY ET AL.: "Phenothiazine derivatives..." XP002315170 retrieved from STN Database accession no. AN: 1968:95776 abstract & ACT.CHIM.ACAD.SCI.HUNG., vol. 53, no. 3, 1967, pages 279-294, -----	10,37
A	WO 01/62954 A2 (XENON GENETICS, INC; WISCONSIN ALUMNI RESEARCH FOUNDATION; UNIVERSITY) 30 August 2001 (2001-08-30) page 51 -----	1-37

-/-

INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 03/076422 A1 (JANSSEN PHARMACEUTICA N.V; VAN EMELEN, KRISTOF; ARTS, JANINE; BACKX, L) 18 September 2003 (2003-09-18) pages 59,81 -----	10, 37
P,A	WO 03/075929 A1 (JANSSEN PHARMACEUTICA N.V; VAN EMELEN, KRISTOF; VERDONCK, MARC, GUSTAA) 18 September 2003 (2003-09-18) cited in the application claim 1 -----	1-37

INTERNATIONAL SEARCH REPORT

US2004/024541

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 02102778	A1	27-12-2002	BR CA EP JP US	0210030 A 2448298 A1 1396487 A1 2003064057 A 2004192701 A1		10-08-2004 27-12-2002 10-03-2004 05-03-2003 30-09-2004
EP 1396487	A1	10-03-2004	BR CA US WO JP	0210030 A 2448298 A1 2004192701 A1 02102778 A1 2003064057 A		10-08-2004 27-12-2002 30-09-2004 27-12-2002 05-03-2003
WO 0210154	A2	07-02-2002	AU EP US	8043801 A 1307444 A2 2004097491 A1		13-02-2002 07-05-2003 20-05-2004
WO 9900386	A1	07-01-1999	US AU	5976497 A 8096798 A		02-11-1999 19-01-1999
WO 02102778	A1	27-12-2002	BR CA EP JP US	0210030 A 2448298 A1 1396487 A1 2003064057 A 2004192701 A1		10-08-2004 27-12-2002 10-03-2004 05-03-2003 30-09-2004
WO 9737975	A1	16-10-1997	DE AU CA EP JP US ZA	19614204 A1 2636897 A 2244860 A1 0892783 A1 2000508307 T 5994356 A 9703002 A		16-10-1997 29-10-1997 16-10-1997 27-01-1999 04-07-2000 30-11-1999 09-10-1998
US 5166147	A	24-11-1992	US	5432188 A		11-07-1995
EP 0320032	A1	14-06-1989	AT AU BG CA CN CS DE DE DK ES FI GR HU IE IL JP JP JP KR MA NO NZ PH	117296 T 2575188 A 60676 B1 1327573 C 1033274 A ,C 9103830 A3 3852816 D1 3852816 T2 651288 A 2070126 T3 885409 A ,B, 3015816 T3 48617 A2 65768 B1 88429 A 1207278 A 1903038 C 6029255 B 125280 B1 21446 A1 885190 A ,B, 226920 A 26670 A		15-02-1995 25-05-1989 29-12-1995 08-03-1994 07-06-1989 13-05-1992 02-03-1995 08-06-1995 24-05-1989 01-06-1995 24-05-1989 31-07-1995 28-06-1989 15-11-1995 13-05-1993 21-08-1989 08-02-1995 20-04-1994 05-12-1997 01-07-1989 24-05-1989 26-06-1990 15-09-1992

INTERNATIONAL SEARCH REPORT

US2004/024541

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0320032	A1		PT 89047 A ,B SU 1724013 A3 US 4992433 A US 5106973 A US 5231184 A ZA 8808744 A	01-12-1988 30-03-1992 12-02-1991 21-04-1992 27-07-1993 25-07-1990
EP 0211457	A2	25-02-1987	AU 6073986 A CN 86105558 A DK 363186 A ES 8802151 A1 FI 863120 A GR 862022 A1 HU 41772 A2 JP 62029575 A NO 863083 A NZ 216918 A PH 22884 A PT 83098 A ,B ZA 8605700 A ZW 14886 A1	05-02-1987 28-01-1987 01-02-1987 16-06-1988 01-02-1987 24-12-1986 28-05-1987 07-02-1987 02-02-1987 29-11-1988 19-01-1989 01-08-1986 30-03-1988 24-02-1988
EP 0156433	A2	02-10-1985	US 5001125 A AT 61050 T AU 576563 B2 AU 4034885 A BG 43690 A3 CA 1238321 A1 CS 8501952 A3 DE 3581819 D1 DK 134185 A ,B, ES 8606289 A1 FI 851177 A ,B, GR 850714 A1 HU 37614 A2 IL 74707 A JP 60226862 A KR 8701158 B1 MA 20387 A1 NO 851167 A ,B, NZ 211494 A PH 22495 A PL 252562 A2 PT 80157 A ,B RO 91197 A1 SU 1384198 A3 US 5157035 A US 5292738 A ZA 8502235 A ZM 1785 A1 ZW 5485 A1	19-03-1991 15-03-1991 01-09-1988 03-10-1985 15-07-1988 21-06-1988 18-11-1992 04-04-1991 27-09-1985 01-10-1986 27-09-1985 14-06-1985 23-01-1986 31-05-1988 12-11-1985 13-06-1987 01-10-1985 27-09-1985 30-05-1988 12-09-1988 03-12-1985 01-04-1985 30-06-1987 23-03-1988 20-10-1992 08-03-1994 26-11-1986 27-03-1986 22-10-1986
US 2985657	A	23-05-1961	NONE	
WO 0162954	A2	30-08-2001	AU 4722801 A CA 2398940 A1 DE 01920143 T1 EP 1315831 A2	03-09-2001 30-08-2001 19-05-2004 04-06-2003

INTERNATIONAL SEARCH REPORT

US2004/024541

INTERNATIONAL SEARCH REPORT

US2004/024541

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 03075929	A1	EP 1485365 A1 EP 1485354 A1	15-12-2004 15-12-2004
